

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**FOIL when  $A \neq 1$  solution (version 14)**

**FOIL the expressions shown below:**

1.  $(2x + 2)(4x - 6)$

$$\begin{aligned} & (2)(4)x^2 + (2)(-6)x + (2)(4)x + (2)(-6) \\ & (8)x^2 + (-12)x + (8)x + (-12) \\ & 8x^2 - 4x - 12 \end{aligned}$$

2.  $(-9x + 3)(-6x + 8)$

$$\begin{aligned} & (-9)(-6)x^2 + (-9)(8)x + (3)(-6)x + (3)(8) \\ & (54)x^2 + (-72)x + (-18)x + (24) \\ & 54x^2 - 90x + 24 \end{aligned}$$

3.  $(-9x + 3)(-7x - 3)$

$$\begin{aligned} & (-9)(-7)x^2 + (-9)(-3)x + (3)(-7)x + (3)(-3) \\ & (63)x^2 + (27)x + (-21)x + (-9) \\ & 63x^2 + 6x - 9 \end{aligned}$$

4.  $(-6x + 9)(-5x + 3)$

$$\begin{aligned} & (-6)(-5)x^2 + (-6)(3)x + (9)(-5)x + (9)(3) \\ & (30)x^2 + (-18)x + (-45)x + (27) \\ & 30x^2 - 63x + 27 \end{aligned}$$

5.  $(5x - 4)(3x + 9)$

$$\begin{aligned} & (5)(3)x^2 + (5)(9)x + (-4)(3)x + (-4)(9) \\ & (15)x^2 + (45)x + (-12)x + (-36) \\ & 15x^2 + 33x - 36 \end{aligned}$$

**FOIL the expressions shown below:**

6.  $(9x - 6)(-3x - 2)$

$$\begin{aligned} & (9)(-3)x^2 + (9)(-2)x + (-6)(-3)x + (-6)(-2) \\ & \quad (-27)x^2 + (-18)x + (18)x + (12) \\ & \quad \quad -27x^2 + 12 \end{aligned}$$

7.  $(-9x + 2)(2x - 9)$

$$\begin{aligned} & (-9)(2)x^2 + (-9)(-9)x + (2)(2)x + (2)(-9) \\ & \quad (-18)x^2 + (81)x + (4)x + (-18) \\ & \quad \quad -18x^2 + 85x - 18 \end{aligned}$$

8.  $(-7x + 9)(-2x + 2)$

$$\begin{aligned} & (-7)(-2)x^2 + (-7)(2)x + (9)(-2)x + (9)(2) \\ & \quad (14)x^2 + (-14)x + (-18)x + (18) \\ & \quad \quad 14x^2 - 32x + 18 \end{aligned}$$

9.  $(-7x - 5)(3x - 8)$

$$\begin{aligned} & (-7)(3)x^2 + (-7)(-8)x + (-5)(3)x + (-5)(-8) \\ & \quad (-21)x^2 + (56)x + (-15)x + (40) \\ & \quad \quad -21x^2 + 41x + 40 \end{aligned}$$

10.  $(3x + 7)(8x - 3)$

$$\begin{aligned} & (3)(8)x^2 + (3)(-3)x + (7)(8)x + (7)(-3) \\ & \quad (24)x^2 + (-9)x + (56)x + (-21) \\ & \quad \quad 24x^2 + 47x - 21 \end{aligned}$$